



Serial No.: 08/943,144

Claims 18-30 are pending. No new matter has been added by way of the above amendment. Specifically, the specification as well as claim 21 have simply amended to correct inadvertent typographical errors. Accordingly, no new matter has been added.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

Issues Under 35 U.S.C. § 112, First Paragraph

The Examiner has rejected claims 18, 19 and 22-30 under 35 U.S.C. § 112, first paragraph. Applicant respectfully traverses.

Concerning this rejection, the Examiner asserts that Applicant has not provided a written description of the conditions for the PCR reactions. However, Applicant respectfully disagrees.

Specifically, it is disclosed in the present specification that the size of the gene is 4.0 Kbp and that the gene can be obtained from plants using a combination of PCR primers that are selected from the group consisting of SEQ ID NO:7, 8, 9, 10, 11, 12, 13, 14 and 15. Utilizing the SEQ ID NOS., Applicant respectfully submits that it is a simple task for a person of ordinary skill in the art to calculate a value of "Tm" (the annealing temperature being one of the most important conditions for the PCR reactions). Furthermore, a PCR kit which is available to the general public utilizes a manual in which both the content of buffer fitting to

the property of DNA polymerase and a program of reaction are described. Accordingly, such a manual provides information concerning conditions for the above PCR reactions. In view of this material, one of ordinary skill in the art is able to select a stringent condition by which other products would not be produced, other than the desired product. As a result, there exists no trial and error factor concerning the present case. Applicant additionally submits that if a combination of other genes should exist in the resultant product attained by PCR, it is the simple task of one of ordinary skill in the art to separate the target gene by using such conventional methods as agarose electrophoresis. This separation can be done on the basis of information concerning the size of the present gene without any undue experimentation.

All of the conditions and procedures described above are well known to one of ordinary skill in the art. Therefore, a specific written description is not needed. A patent need not teach, and preferably omits, what is well known in the art. Spectra-Physics Inc. v. Coherent Inc., 3 USPQ2d 1737 (Fed. Cir. 1987).

Accordingly, in view of these remarks, Applicant respectfully submits that claims 18, 19 and 22-30 satisfy the requirements of 35 U.S.C. § 112, first paragraph.

The Examiner has also rejected claims 18, 19 and 22-30 under 35 U.S.C. § 112, first paragraph, stating that the present specification does not provide enablement for the isolation of an

aldehyde oxidase gene of 4.4 Kbp. Applicant respectfully traverses.

The Examiner's rejection is based on the following allegations:

- (a) Applicant has not disclosed the conditions for the PCR reactions;
- (b) Applicant has not disclosed sequences from other plant species which were isolated by a PCR reaction using said primer; and
- (c) the process for controlling production of an aldehyde oxidase will not be enabled as the expression vector used in the transformation does not contain the gene which encodes aldehyde oxidase.

However, Applicant respectfully disagrees. Specifically, Applicant has disclosed the size of the gene as a structural feature or physical property and primer sequences for a PCR reaction. There is also a disclosure of the measurement of aldehyde oxidase activity in Example 3 on pages 17-18 and at pages 6-7 of the present specification. Moreover, Applicant respectfully submits that published documents in which these measurements are described are available to one of ordinary skill in the art. Illustrative of this is T. Koshiba et al., *Plant Physiology*, 110, 781-789 (1996) described at page 6, lines 9-10 of the present specification. Furthermore, one of ordinary skill in the art is able to confirm a gene which encodes aldehyde oxidase

by using a matching test of nucleotide sequences on the basis of the disclosed sequences. For example, Applicant has disclosed sequences shown in SEQ ID NO:1-4 which were isolated from corn. Accordingly, there exists no trial and error factor for one of ordinary skill in the art to confirm the transformant producing aldehyde oxidase which is encoded by the gene in the expression vector as well as to obtain the gene from a large number of other fragments which encode the other enzymes except aldehyde oxidase. Namely, this is a common type of screening envisioned by the present application. See also In re Wands, 8 USPQ2d 1400 (Fed. Cir. 1988) where the court overturned an Examiner's finding of lack of enablement on the basis that screening is an expected experiment in the biotechnology art.

Accordingly, in view of the above remarks, Applicant respectfully submits that the present specification provides enablement for the isolation of an aldehyde oxidase gene of 4.4 Kbp. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

In view of the above remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims. Applicant has established above that the present claims meet the requirements of 35 U.S.C. § 112, first paragraph.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant hereby petitions for an extension of three (3) months to February 4, 2000 in which to file a reply to the Office

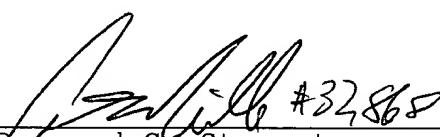
Action. The required fee of \$870.00 is enclosed herewith.

If the Examiner has any questions concerning this application, he is requested to contact Craig A. McRobbie, Reg. No. 42,874, at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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